



AN INITIATIVE OF

the de Beaumont Foundation + Kaiser Permanente

# Preventing Violence in American Cities with Safer Alcohol Sales

Tools Cities Can Use to Address Increasing Alcohol Use and Violence Since the Onset of COVID-19



**CityHealth**, an initiative of the de Beaumont Foundation and Kaiser Permanente, works to advance a package of proven policy solutions that will help millions of people live longer, better lives in vibrant, prosperous communities. CityHealth regularly evaluates cities on the number and strength of their policies. Learn more at [www.cityhealth.org](http://www.cityhealth.org).



AN INITIATIVE OF

the de Beaumont Foundation + Kaiser Permanente

**cityhealth.org**

## The Issue

Alcohol consumption has been rising in the U.S. since the turn of the century, along with alcohol-related harms. On average, alcohol use contributes to 104,000 deaths per year in the U.S., including 47% of homicides, according to U.S. Centers for Disease Control and Prevention (CDC) estimates.<sup>1</sup> Alcohol problems cost the U.S. \$249 billion in 2010, the last year for which an estimate is available.<sup>2</sup> Alcohol is the number one drug used by young people,<sup>3</sup> and every year approximately 3,500 people under 21 die because of alcohol use.<sup>1</sup>



Alcohol use contributes to

**104,000 deaths**

per year in the U.S., including

**47% of homicides**



Alcohol problems cost the U.S.

**\$249 billion**

in 2010



Prior to the COVID-19 pandemic, negative consequences of alcohol use were rising: Alcohol-specific death rates increased 55% from 2000 to 2016,<sup>4</sup> emergency department visits involving alcohol consumption grew by 62% from 2006 to 2014,<sup>5</sup> and the age-adjusted death rate for alcoholic liver disease, an indicator of excessive use, rose by 37.2% from 2000 to 2017.<sup>6</sup> Newer data show that the rates of alcohol sales and binge drinking have increased sharply since the onset of the COVID-19 pandemic.<sup>7,8</sup>

Research has consistently shown that violent crime increases when city neighborhoods have a high density of places that sell or serve alcohol, compared to neighborhoods with lower alcohol outlet density. Multiple studies have found that areas with greater alcohol outlet



density have more homicides, aggravated assaults, and sexual assaults, even after accounting for other aspects of neighborhood disadvantage.<sup>9-12</sup>

Other studies have found these outlets are more likely to be located in low-income neighborhoods, despite the fact that alcohol consumption rises with income,<sup>13</sup> and in racial and ethnic minority neighborhoods.<sup>14-17</sup> Recent studies have concluded that, at least in some cities, this overconcentration of alcohol outlets is tied to redlining, the racially discriminatory lending practices by private and public lenders that stigmatized neighborhoods of color and subjected them to decades of disinvestment. One result of this disinvestment was a proliferation of alcohol outlets in these neighborhoods. When researchers have tested possible explanations for this proliferation, the interaction of redlining with the racial makeup of the neighborhoods had the greatest explanatory power.<sup>18,19</sup>

**Alcohol Outlet:** Businesses that sell alcohol for on-premises consumption (such as restaurants



and bars) or off-premises consumption (such as liquor and convenience stores)

**Violent Crime:** Crimes in which the victim is harmed or threatened by violence, such as



rape and sexual assault, robbery, assault, and murder

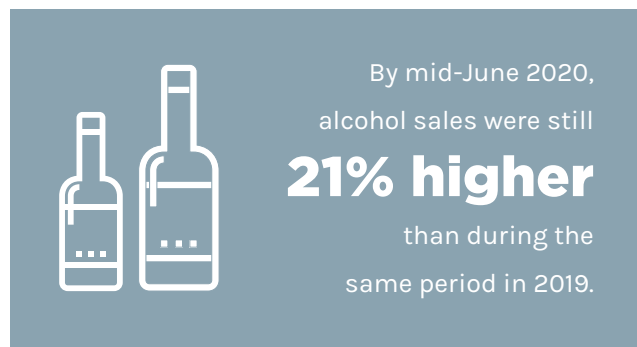


There is significant potential to address outlet density as an equity issue. For instance, prior to the pandemic, Baltimore's Roland Park neighborhood, where the median income is \$104,482 per year and the population is 82.6% White, had 2.7 liquor stores per 10,000 population. Greenmount East, with a median income of \$23,277 per year and a 96.6% African American population, had nearly three times that number: 7.3 off-premises outlets per 10,000 people.<sup>20</sup> Greater local control of alcohol outlets in Baltimore (see maps section at the end) could give low-income communities and communities of color a greater voice in the concentration of outlets in their neighborhoods.

CityHealth, an initiative of the de Beaumont Foundation and Kaiser Permanente, awards the nation's 40 largest cities with gold, silver, or bronze medals annually in nine policy areas that experts say help residents lead healthier lives and make communities thrive. One of these policy solutions is safer alcohol sales, which come about through local regulations — from licensing to zoning — enabling cities to address alcohol-related consequences by specifying the number, density, and sales and service practices of alcohol outlets in a given neighborhood.

## Alcohol & COVID-19

Since the start of the COVID-19 pandemic, a wide range of businesses, including bars and restaurants, have experienced periods of closure and resulting drops in sales.<sup>21</sup> At the same time, many states have deemed off-premises alcohol sales — including sales derived from liquor, grocery, and convenience stores where alcohol will be consumed off-premises — as “essential.”



Since the onset of COVID-19, police departments have reported an increase in domestic violence incidents, and numerous cities are reporting increases in homicides and aggravated assaults.

As alcohol purchases shifted away from bars and restaurants, take-away sales of alcohol have risen dramatically: Nielsen reported an immediate increase in the week ending March 14, 2020, with sales at off-premises outlets such as liquor and grocery stores up 27.6% for wine, 26.4% for beer, and 14% for cider and malt beverages compared to the prior year.<sup>22</sup> By mid-June 2020, alcohol sales were still 21% higher than during the same period in 2019.<sup>23</sup> Meanwhile, recent surveys — including one by an academic research firm,<sup>24</sup> one from a network of treatment centers,<sup>25</sup> and one from a market research company<sup>26</sup> — have found that people are indeed drinking more in the wake of the pandemic than they did previously. Another new study found that one in five women had increased their frequency of heavy drinking (defined as four or more drinks within two hours), and one in 10 women reported increased alcohol-related problems during the pandemic.<sup>7</sup>

Shifting alcohol consumption patterns during the COVID-19 pandemic are likely to have significant health and safety implications, based on experience with prior similar events such as SARS, the World Trade Center, and Hurricanes Rita and Katrina;<sup>27</sup> however, it will take years for research to definitively measure the consequences. More immediately, since the onset of COVID-19, police

departments have reported an increase in domestic violence incidents,<sup>28</sup> and numerous cities are reporting increases in homicides and aggravated assaults.<sup>29</sup>

## Benefits of Safer Alcohol Sales Policies

After reviewing 88 studies regarding alcohol outlet density and public health, the Community Preventive Services Task Force, the CDC's expert advisory group on what works best in public health, concluded there is strong evidence that zoning and licensing rules for alcohol outlets can reduce excessive alcohol consumption and related harms.<sup>30</sup>

Policies that control the amount of alcohol sales in a neighborhood can have a significant impact on residents' safety, well-being, and health. Safer alcohol sales policies have the potential to:

- ▶ **Make communities safer:** Influencing the number, density and practices of alcohol retail outlets can result in safer communities with fewer drinking-related crimes and injuries.<sup>31</sup>
- ▶ **Reduce excessive drinking:** Laws that influence the placement and practices of retail alcohol establishments can be one of the most cost-effective ways to reduce excessive drinking by limiting the physical availability of alcohol.<sup>32</sup>
- ▶ **Reduce illegal drinking:** Safer alcohol sales rules are effective strategies for reducing drinking among underage youth.<sup>31</sup>

Safe rules governing alcohol sales prevent violence, disease and death.<sup>33</sup> Having these policies in place will help cities to realize myriad health and economic benefits and improve community conditions. The bottom line: Safer alcohol sales policies will improve lives and help cities thrive.

There is strong evidence that zoning and licensing rules for alcohol outlets



can reduce excessive alcohol consumption and related harms.



## What Can Cities Do?

What cities can do to achieve safer alcohol sales is highly dependent on their level of local control. Many cities possess the ability to regulate alcohol outlet density and service practices, but they may not fully understand the breadth of their authority. City pathways for action include licensing authority, zoning, and/or nuisance powers.

Although city autonomy may vary, the opportunity for cities to take charge of their alcohol outlets is perhaps even more urgent in the wake of the COVID-19 pandemic. Ensuring safer alcohol sales also means taking steps to prevent outlets from becoming sites where people congregate, potentially facilitating the transmission of the coronavirus. For example, in April 2020, Chicago Mayor Lori Lightfoot used that city's powers over alcohol outlets to order them closed by 9 p.m.,<sup>34</sup> to encourage adherence to pandemic-related safety precautions in and around the outlets.

This exemplifies the flexibility that cities can have to address a wide range of problems that may be related to alcohol outlets. Local regulatory authority — from licensing to zoning — can allow cities to specify the practices, number, and density of alcohol outlets in a given neighborhood. Limiting alcohol outlet density and regulating alcohol sales practices can have a significant impact on residents' safety, well-being, and health.<sup>30</sup>

Depending on the degree of local authority they have, cities can limit, suspend, revoke, or deny licenses or other permissions to operate, thereby affecting the number and location of outlets. Many cities can also use other local powers (such as zoning) to affect a wide range of service practices and activities in or near the outlets.



## SAFER ALCOHOL SALES POLICY OPTIONS FOR CITIES

- Banning particular products or product sizes (e.g., no malt-based beverages larger than 18 ounces, no airline mini bottles, etc.)
- Restricting signage and placement of advertising
- Limiting overall size as well as floor space devoted to alcoholic beverage sales
- Limiting hours and days of alcohol sales
- Requiring distances between alcohol outlets, or between outlets and sensitive uses such as schools, playgrounds, and churches
- Restricting drink specials such as time-limited pricing, all-you-can-drink, and special high-potency drinks containing multiple shots of liquor
- Mandating responsible beverage service training for all servers and sellers
- Requiring, for outlets licensed as restaurants, that more sales revenue come from food than alcohol
- Making permission to operate contingent on absence of a wide range of nuisance activities, including disturbance of the peace, drug activity, public drunkenness, drinking in public, harassment of passersby, gambling, prostitution, sale of stolen goods, public urination, theft, assaults, batteries, acts of vandalism, excessive littering, loitering, graffiti, illegal parking, excessive loud noises (especially in the late night or early morning hours), traffic violations, curfew violations, lewd conduct, or police detentions and arrests
- Banning sale of drug paraphernalia
- Levying a nuisance abatement fee on alcohol outlets to pay for enforcement of these provisions



## CityHealth Policy Assessment

In response to the potential health and safety risks of alcohol outlets, CityHealth assesses and awards medals to cities based on their adoption of policies to regulate the sale of alcohol within their borders. To have the greatest positive impact, city laws should apply to all alcohol sales, address public health and safety, and give cities the authority to take enforcement action against outlets that do not comply with the law.

Cities that have taken jurisdiction over all alcohol outlets — including new and existing outlets, businesses selling alcoholic beverages of any kind, businesses selling alcohol for consumption off-premises (such as liquor and package stores), and bars and restaurants selling for on-premises consumption — receive a gold medal. If local laws govern some but not all outlets, CityHealth awards them a silver medal. There are no bronze medal criteria for the safer alcohol sales policy evaluation.

### CITYHEALTH'S 2020 SAFER ALCOHOL SALES MEDALS

Albuquerque	NO MEDAL	Los Angeles	NO MEDAL
Atlanta	GOLD	Louisville	NO MEDAL
Austin	NO MEDAL	Memphis	SILVER
Baltimore	NO MEDAL	Mesa	NO MEDAL
Boston	GOLD	Milwaukee	GOLD
Charlotte	NO MEDAL	Nashville	SILVER
Chicago	GOLD	New York	NO MEDAL
Columbus	NO MEDAL	Oklahoma City	NO MEDAL
Dallas	NO MEDAL	Philadelphia	NO MEDAL
Denver	GOLD	Phoenix	NO MEDAL
Detroit	NO MEDAL	Portland	NO MEDAL
El Paso	NO MEDAL	Sacramento	SILVER
Ft. Worth	NO MEDAL	San Antonio	NO MEDAL
Fresno	SILVER	San Diego	SILVER
Houston	NO MEDAL	San Francisco	SILVER
Indianapolis	NO MEDAL	San Jose	SILVER
Jacksonville	NO MEDAL	Seattle	NO MEDAL
Kansas City	GOLD	Tucson	NO MEDAL
Las Vegas	GOLD	Virginia Beach	NO MEDAL
Long Beach	SILVER	Washington, D.C.	GOLD

 GOLD  SILVER  NO MEDAL

Based on its assessment of city laws in place as of April 2020, CityHealth awarded gold medals for safer alcohol sales to eight of the nation's 40 largest cities: Atlanta, Boston, Chicago, Denver, Kansas City, Las Vegas, Milwaukee, and Washington D.C. Another eight cities earned silver medals.

## Conclusion

Alcohol outlets vary greatly, in size, products carried, hours of operation, and so on. City-level policies can influence everything from the location of alcohol outlets to their lighting, staffing, cleanliness, and the mix of products they sell. Deployment of these policies can help communities push this variation in the direction of better health and safety for all.

The bottom line is that cities that pass and enforce strong alcohol sales policies are safer and better poised to tackle myriad crises, from homicide spikes to pandemics. Not only do these policy interventions improve public safety, but they also create the space for critical conversations about community — how neighborhoods are developed and shaped, and how residents are engaged. The spacing and placement of alcohol outlets has significant racial and class implications and consequences, as the concentration of these outlets in low-income, minority communities underscores the continuing harms and impact of structural racism in urban planning.

By regulating where, when, and how alcohol may be sold, many cities can begin to engage communities in thoughtful discussions around economic development and neighborhood investment, while also ensuring improved health outcomes by making greater use of their power to address the placement and practices of alcohol outlets.

Safer alcohol sales improve health equity and serve as an important part of making cities places where everyone can live longer, better lives in vibrant, prosperous communities.





## Maps: Alcohol Outlets and Violent Crime

Peer-reviewed studies of the relationship between alcohol outlet density and violent crime have taken into account a wide range of co-factors, and still found a net effect of the outlets on crime. Co-factors in these studies have included, for each neighborhood or census tract studied: age composition, percent owner- or renter-occupied housing, drug arrest counts or open-air drug markets, gang activity, percent in poverty, percent unemployed, percent on public assistance, percent of female-headed households, percent African-American or White, median household income, median home value, population density, and percent of adults 25 or above with a college degree.<sup>9,10,12</sup>

The relationship between alcohol outlets and violent crime is strongest for places that sell alcohol for consumption off-premises, where there are seldom trained personnel monitoring people's drinking.<sup>35</sup> CityHealth created maps of several cities that identify the census tracts with more violent crimes—rape and sexual assault, robbery, assault, and murder—than elsewhere in that city, as well as how off-premises alcohol outlets cluster in the city.

The purpose of these maps is simply to show these two primary sets of data. On the maps, high-crime areas often coincide with areas of high alcohol outlet density; however, high outlet density areas do not always coincide with areas of high crime. Colors on the maps show higher levels of alcohol outlet density, while the black polygons

outline census tracts with higher levels of violent crime than the rest of the city.

Where published studies have looked at the relationships between these two sets of data and accounted for possible co-factors, these studies are cited in the city-specific text accompanying each map. For the cities mapped here that have not yet been studied in depth, the maps should be understood for what they are: pictorial depictions of two data sets, without establishing any claims about how the two may be related.





## ATLANTA

Atlanta, a CityHealth gold medal city in safer alcohol sales, has significant local control over its alcohol outlets. From 2003 to 2007, Atlanta took advantage of this to intentionally decrease the availability of alcohol in its Buckhead neighborhood, including both off- and on-premises outlets, by 3 percent. A peer-reviewed study compared the crime outcome to similar Atlanta neighborhoods, where the number of outlets increased over the same time period. While overall crime was dropping in Atlanta at this time, the Buckhead neighborhood experienced a drop in crime that was two times greater than the decrease in comparable neighborhoods.<sup>36</sup>

### ATLANTA, GA



**Total alcohol outlets:** 1,015



**Off-premises outlets:** 500

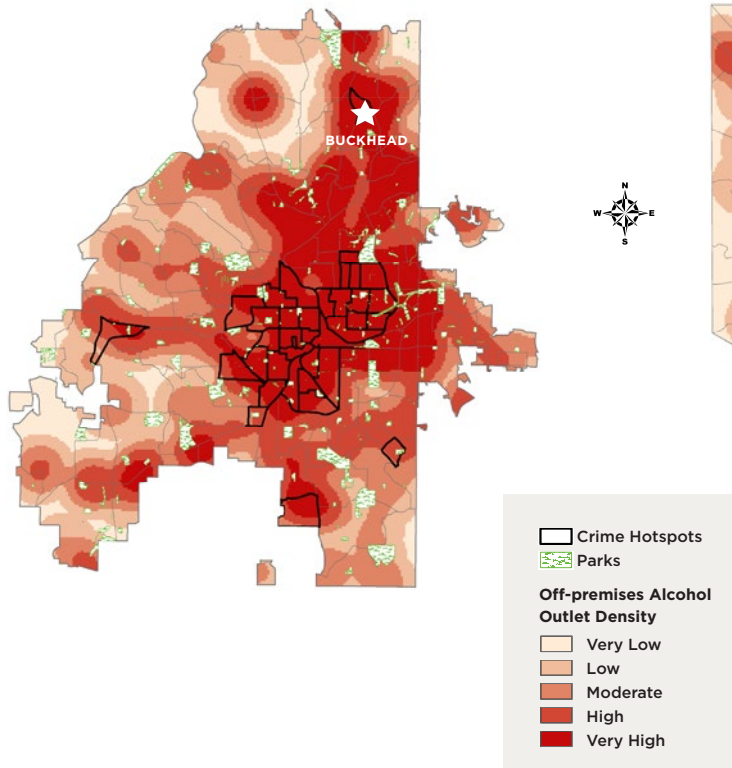
- 1 outlet per 996 people
- 15x more off-premises alcohol retailers than public libraries
- 26x more off-premises alcohol retailers than public high schools



**Estimated total alcohol-related violent crimes per 1000 people from 2016–2018:** 14.59



**Local licensing authority:** Joint local/state licensing and regulatory powers



## BALTIMORE

Baltimore, in contrast, has very limited local control over its alcohol outlets. Multiple studies have found a strong relationship between alcohol outlet density and harms, including violent crime,<sup>35,37</sup> pedestrian safety,<sup>38</sup> and life expectancy<sup>39</sup> in Baltimore. One study estimated that simply removing the liquor stores located in the city's residential areas (a historical artifact not permitted in the current zoning code) could potentially prevent between 7 and 52 homicides and save the city between \$8.7 and \$65 million in costs annually.<sup>40</sup>

### BALTIMORE, MD



**Total alcohol outlets:** 1,209



**Off-premises outlets:** 646

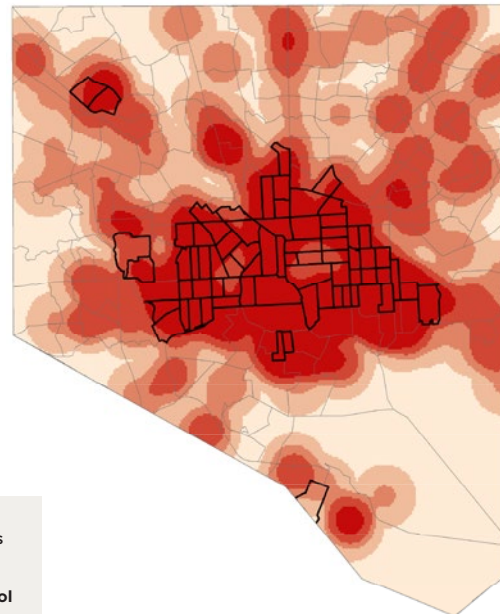
- 1 outlet per 933 people
- 26x more off-premises alcohol retailers than public libraries
- 16x more off-premises alcohol retailers than public high schools



**Estimated total alcohol-related violent crimes per 1000 people from 2016–2018:** 36.81



**Local licensing authority:** Exclusive state licensing authority, concurrent local regulatory authority



## INDIANAPOLIS & MEMPHIS

Indianapolis and Memphis both have some degree of local authority over alcohol outlets. Maps of off-premises outlet density and areas with higher levels of violent crime than the rest of the city suggest a close relationship between the two.


### INDIANAPOLIS, IN

 **Total alcohol outlets:** 1,903

 **Off-premises outlets:** 498

- 1 outlet per 1,741 people
- 19x more off-premises alcohol retailers than public libraries
- 22x more off-premises alcohol retailers than public high schools

 **Estimated total alcohol-related violent crimes per 1000 people from 2016–2018:** 23.26

 **Local licensing authority:** Exclusive state licensing authority, concurrent local regulatory authority

### MEMPHIS, TN

 **Total alcohol outlets:** 1,085

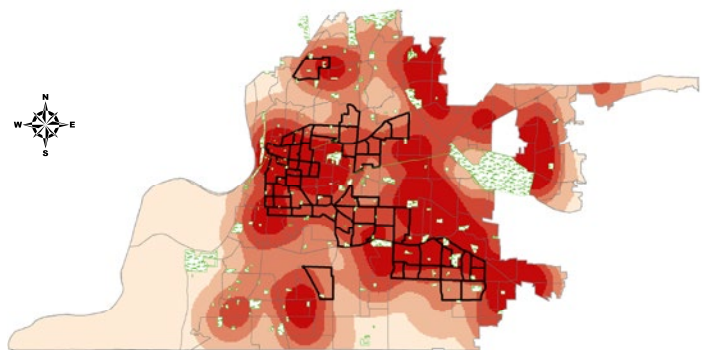
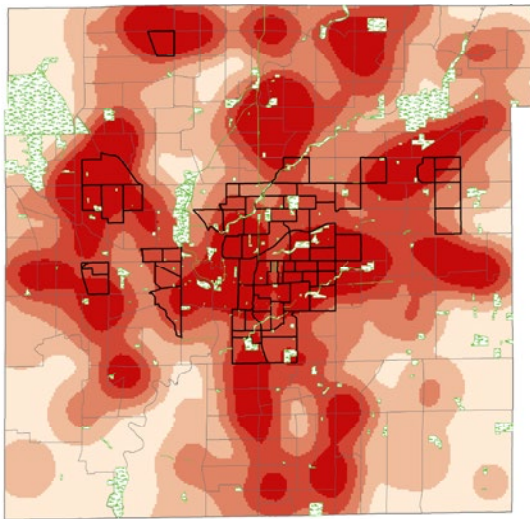
 **Off-premises outlets:** 456

- 1 outlet per 4,819 people
- 25x more off-premise alcohol retailers than public libraries
- 15x more off-premise alcohol retailers than public high schools

 **Estimated total alcohol-related violent crimes per 1000 people from 2016–2018:** 25.87

 **Local licensing authority:** Mixed

*\*Rape data not available*



## AUSTIN & SAN ANTONIO

Texas cities only have local licensing authority over on-premises outlets where more than 75% of sales come from alcohol, but they can influence alcohol outlets through zoning and/or nuisance regulations. Maps of these cities suggest a close association between off-premises alcohol outlet density and areas of the city with comparatively high levels of violent crime.


### AUSTIN, TX

 **Total alcohol outlets:** 2,156

 **Off-premises outlets:** 754

- 1 outlet per 1,279 people
- 28x more off-premise alcohol retailers than public libraries
- 22x more off-premise alcohol retailers than public high schools

 **Estimated total alcohol-related violent crimes per 1000 people from 2016–2018:** 8.02

 **Local licensing authority:** Mixed


### SAN ANTONIO, TX

 **Total alcohol outlets:** 2,939

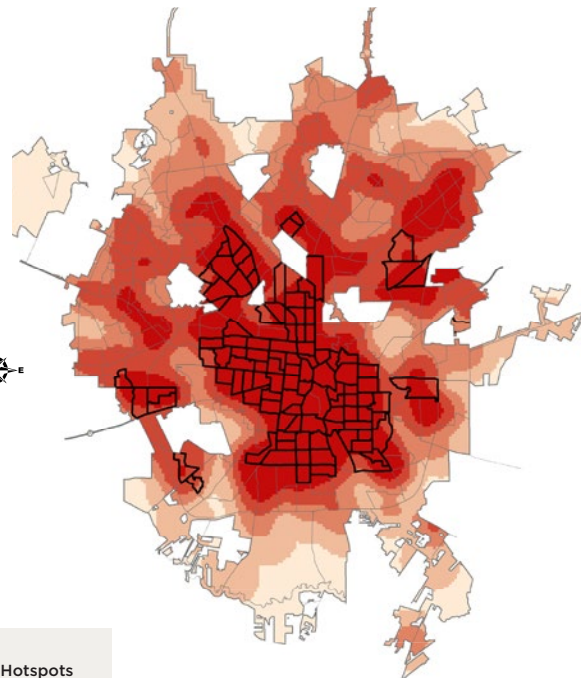
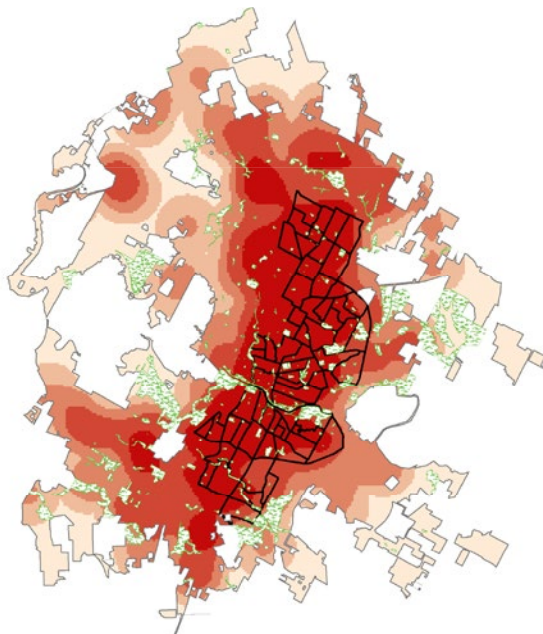
 **Off-premises outlets :** 1,194

- 1 outlet per 1,283 people
- 34x more off-premise alcohol retailers than public libraries
- 21x more off-premise alcohol retailers than public high schools

 **Estimated total alcohol-related violent crimes per 1000 people from 2016–2018:** 10.24

 **Local licensing authority:** Mixed

*\*Sexual assault used as a proxy for rape*





## TUCSON

Arizona cities have no local licensing authority over alcohol outlets. The Tucson map again suggests that the census tracts with comparative high rates of crime may be closely associated with greater off-premises alcohol outlet density.

### TUCSON, AZ



**Total alcohol outlets:** 918



**Off-premises outlets:** 351

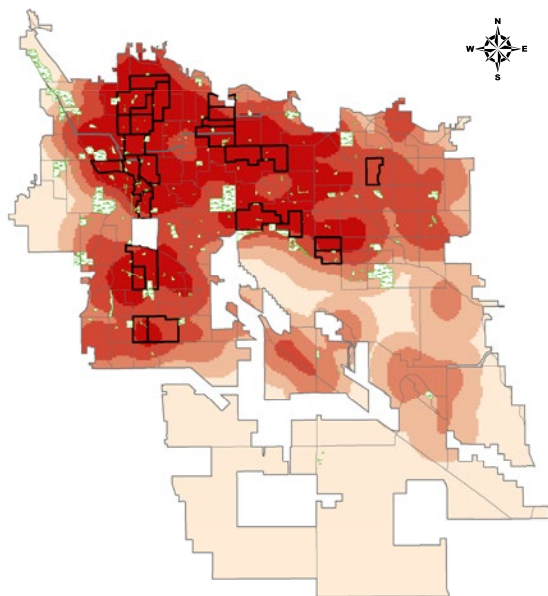
- 1 outlet per 1,555 people
- 12x more off-premise alcohol retailers than public libraries
- 4x more off-premise alcohol retailers than public high schools



**Estimated total alcohol-related violent crimes per 1000 people from 2016–2018:** 10.09



**Local licensing authority:** Exclusive or near-exclusive state preemption



## Reading the Maps: Key Terms

- ▶ **Total alcohol outlets:** The total number of active licensed alcohol outlets inside the city boundary as of December 31, 2018 (obtained directly from the relevant city licensing bodies). Darker red shades indicate the census tracts that have higher densities of off-premises alcohol outlets (that is, a greater number of off-premises outlets per square mile).
- ▶ **Off-premises outlets:** Alcohol outlets that sell alcohol for consumption off-site, including liquor stores, big-box retailers, grocery stores, small convenience stores, gas stations, and pharmacies.
- ▶ **Estimated total alcohol-related violent crime per 1000 people from 2016–2018:** The total number of violent crimes that occurred between 8 p.m. and 4 a.m. on weekdays (Monday–Friday), and throughout the day and night on weekends (Saturday and Sunday) — the times when crimes are most likely to be alcohol-related. Alcohol involvement is not reliably coded in police data, so it is common to restrict violence data based on days and/or hours as a proxy for alcohol-related crimes in alcohol outlet density research. Population estimates were for 2018.
- ▶ **Local licensing authority:** The degree to which cities have the power to license alcohol outlets varies between jurisdictions. The maps note whether and how state governments limit cities' ability to take action.
  - ▶ **Exclusive or near-exclusive state authority:** Many states exclude local governments from the retail licensing process and strictly limit or prohibit the use of local land-use zoning restrictions. Local governments in these states often serve in an advisory capacity in the state licensing process. The state does not have to accept that advice, and it prohibits local governments from imposing additional restrictions on alcohol retail outlet density beyond those imposed through the state licensing process except in very limited circumstances.
  - ▶ **Exclusive state licensing authority, concurrent local regulatory authority:** Many states retain exclusive authority to license alcohol outlets but allow local governments to use their local zoning and police powers to restrict certain state licensing decisions, including the imposition of significant restrictions on the number and location of new alcohol outlets.

► **Joint local/state licensing and regulatory powers:**

In these states, alcohol retailers must obtain one license from the state and another from the municipality where they are located. This gives the primary responsibility for determining alcohol availability to local governments, subject to minimum standards established by the state. Local jurisdictions can rely on their licensing authority to regulate alcohol outlet density, although this may be augmented with local zoning regulations. Excluded from this category are states that maintain significant control over the local licensing process or dictate when a municipality must issue a license. States are largely bound by the decision of a local government to refuse to issue a new license or renewal. If the local licensing authority is not autonomous in its decision-making or the state can ignore local licensing decisions, then the level of local authority is reported in one of the more restrictive categories.

► **Exclusive local licensing with state minimum standards:** States in this category delegate licensing authority entirely to local governments and do not issue state licenses. Instead, the state establishes limitations on how that licensing authority is exercised. Local governments can use local zoning regulations, subject to limitations established in state law. Excluded from this category are states that maintain significant control over the local licensing process or dictate when a municipality must issue a license. If the local licensing authority is not autonomous in its decision-making, that state will be reported in one of the more restrictive categories.

► **Mixed:** These states use a combination of one or more of the four categories based on types of alcoholic beverages (e.g., joint licensing for beer and wine and state exclusive authority for distilled spirits) or type of alcohol outlet (e.g., one category for on-premises establishments and another for off-premises establishments).

## Frequently Asked Questions

### 1. What is an alcohol outlet?

According to the U.S. Centers for Disease Control and Prevention, an alcohol outlet is defined as, “a licensed establishment that sells alcoholic beverages.”<sup>41</sup> There are two general types: on-premises alcohol outlets (e.g. restaurants and bars), which sell alcohol for consumption on-site; and off-premises alcohol outlets (e.g. liquor stores), which sell alcohol for consumption elsewhere. The number and location of alcohol outlets are strong indicators of the availability of alcoholic beverages. In these maps, we focused on off-premises outlets as their spatial relationship with violent crimes is strong and consistent. We excluded alcohol manufacturers and wholesalers, as well as alcohol outlets that have significantly limited hours and days of sale for the general public (e.g. arenas, airlines, daily permits).

### 2. How is violent crime defined?

According to the National Institute of Justice, “In a violent crime, a victim is harmed by or threatened with violence. Violent crimes include rape and sexual assault, robbery, assault, and murder.”<sup>42</sup> We limited our violent crime data to cases that occurred between 8 p.m. and 4 a.m. on weekdays (Monday-Friday), and throughout the day and night on weekends (Saturday and Sunday), as crimes during these times are more likely to be alcohol-related. The exact crime categories we included vary slightly by city due to the differences in crime codes and definitions used in each city.

### 3. How is neighborhood disadvantage defined in public health studies of alcohol outlet density?

Socioeconomic disadvantage and residential instability are the main drivers of neighborhood disadvantage. In studies of the relationship between alcohol outlet density and harms such as violent crime, researchers have often measured these factors using a neighborhood deprivation index or neighborhood-level characteristics, including household income, education attainment, and racial/ethnic composition. For instance, one commonly used index, the Ross and Mirowsky Social Disadvantage Index, combines information on female-headed households, families living in poverty, owner-occupied housing, and attainment of college degrees among adults in a neighborhood.<sup>43</sup>

## Endnotes

- 1 Centers for Disease Control and Prevention. Alcohol-Related Disease Impact Software. National Center for Chronic Disease Prevention and Health Promotion, Division of Adult and Community Health. [https://hcccd.cdc.gov/DPH\\_ARDI/default/default.aspx](https://hcccd.cdc.gov/DPH_ARDI/default/default.aspx). Published 2020. Accessed January 5, 2020.
- 2 Sacks JJ, Gonzales KR, Bouchery EE, Tomedi LE, Brewer RD. 2010 National and State Costs of Excessive Alcohol Consumption. *American Journal of Preventive Medicine*. 2015;49(5):e73-79.
- 3 Substance Abuse and Mental Health Services Administration. *Key Substance Use and Mental Health Indicators in the United States: Results from the 2019 National Survey on Drug Use and Health*. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration;2020.
- 4 Spillane S, Shiels MS, Best AF, et al. Trends in alcohol-induced deaths in the United States, 2000-2016. *JAMA Network Open*. 2020;3(2):e1921451-e1921451.
- 5 White AM, Slater ME, Ng G, Hingson R, Breslow R. Trends in Alcohol-Related Emergency Department Visits in the United States: Results from the Nationwide Emergency Department Sample, 2006 to 2014. *Alcoholism: Clinical and Experimental Research*. 2018;42(2):352-359.
- 6 Yoon Y-H, Chen CM. Liver cirrhosis mortality in the United States: National, state, and regional trends, 2000-2017. CSR, Incorporated. <https://pubs.niaaa.nih.gov/publications/surveillance114/Cirr17.htm>. Published 2019. Accessed February 11, 2021.
- 7 Pollard MS, Tucker JS, Green HD, Jr. Changes in Adult Alcohol Use and Consequences During the COVID-19 Pandemic in the US. *JAMA Network Open*. 2020;3(9):e2022942-e2022942.
- 8 U.S. Department of the Treasury Alcohol and Tobacco Tax and Trade Bureau. Statistical Release: Tax Collections - Cumulative Summary Q4 2020. U.S. Department of the Treasury. <https://www.ttb.gov/images/pdfs/statistics/4thqtr/4thqtr2020.pdf>. Published 2020. Accessed February 2, 2021.
- 9 Parker RN, Williams KR, McCaffree KJ, et al. Alcohol availability and youth homicide in the 91 largest US cities, 1984-2006. *Drug and Alcohol Review*. 2011;30(5):505-514.
- 10 Toomey TL, Erickson DJ, Carlin BP, et al. The association between density of alcohol establishments and violent crime within urban neighborhoods. *Alcoholism: Clinical and Experimental Research*. 2012;36(8):1468-1473.
- 11 Han D, Gorman DM. Exploring Spatial Associations between On-Sale Alcohol Availability, Neighborhood Population Characteristics, and Violent Crime in a Geographically Isolated City. *Journal of Addiction*. 2013;2013:356152.
- 12 Franklin FA, Laveist TA, Webster DW, Pan WK. Alcohol outlets and violent crime in Washington D.C. *Western Journal of Emergency Medicine*. 2010;11(3):283-290.
- 13 Morrison C, Gruenewald PJ, Ponicki WR. Race, Ethnicity, and Exposure to Alcohol Outlets. *Journal of Studies on Alcohol and Drugs*. 2016;77(1):68-76.
- 14 Berke EM, Tanski SE, Demidenko E, Alford-Teaster J, Shi X, Sargent JD. Alcohol retail density and demographic predictors of health disparities: A geographic analysis. *American Journal of Public Health*. 2010;100(10):1967-1971.
- 15 Gorman DM, Speer PW. The concentration of liquor outlets in an economically disadvantaged city in the northeastern United States. *Substance Use & Misuse*. 1997;32(14):2033-2046.
- 16 LaVeist TA, Wallace JMJ. Health risk and inequitable distribution of liquor stores in African American neighborhoods. *Social Science and Medicine*. 2000;51:613-617.
- 17 Romley JA, Cohen D, Ringel J, Sturm R. Alcohol and environmental justice: the density of liquor stores and bars in urban neighborhoods in the United States. *Journal of Studies on Alcohol and Drugs*. 2007;68(1):48-55.
- 18 Trangenstein PJ, Gray C, Rossheim ME, Sadler R, Jernigan DH. Alcohol Outlet Clusters and Population Disparities. *Journal of Urban Health*. 2019.
- 19 Lee JP, Ponicki W, Mair C, Gruenewald P, Ghanem L. What explains the concentration of off-premise alcohol outlets in Black neighborhoods? *SSM - Population Health*. 2020;12:100669.
- 20 Baltimore City Health Department. Neighborhood Health Profile Reports. Baltimore City Health Department. <https://health.baltimorecity.gov/neighborhoods/neighborhood-health-profile-reports>. Published 2017. Accessed February 7, 2021.
- 21 Sontag E. Where Restaurants and Bars Are Closing Again Across the U.S. Eater. <https://www.eater.com/2020/7/1/21310415/restaurants-bars-shutdown-closed-covid-19-cases-spiking>. Published 2020. Accessed September 15, 2020.
- 22 Pershan C. Now Is a Time of Boom and Bust for the Liquor Industry. Eater. <https://www.eater.com/2020/3/27/21196290/liquor-grocery-store-alcohol-sales-increase-coronavirus-impact-covid-19>. Published 2020. Accessed September 15, 2020.
- 23 Nielsen Data: Some Alcohol Consumers Returning to Pre-COVID Shopping Patterns. Wine Industry Advisor. <https://wineindustryadvisor.com/2020/06/23/alcohol-consumers-returning-pre-covid-shopping-patterns>. Published 2020. Accessed September 15, 2020.
- 24 Barbosa C, Cowell A, Dowd W. How Has Drinking Behavior Changed During the COVID-19 Pandemic? [https://www.rti.org/sites/default/files/covid19\\_alcohol\\_survey\\_webinar\\_slides\\_071420.pdf?utm\\_campaign=SSES\\_SSES\\_ALL\\_LeadGen2020&utm\\_source=IntEmail&utm\\_medium=Email&utm\\_content=COVID19DrinkingSurvey-WebinarPostAtt](https://www.rti.org/sites/default/files/covid19_alcohol_survey_webinar_slides_071420.pdf?utm_campaign=SSES_SSES_ALL_LeadGen2020&utm_source=IntEmail&utm_medium=Email&utm_content=COVID19DrinkingSurvey-WebinarPostAtt). Published 2020. Accessed September 15, 2020.



- 25 The Recovery Village. Drug and Alcohol Use Increase During COVID-19. <https://www.therecoveryvillage.com/drug-addiction/news/drug-alcohol-use-rising-during-covid/>. Published 2020. Accessed January 21, 2021.
- 26 Furnari C. Survey: Americans are Drinking More To Cope With Coronavirus-Induced Stress. Forbes Media. <https://www.forbes.com/sites/chrisfurnari/2020/06/30/survey-americans-are-drinking-more-to-cope-with-coronavirus-induced-stress/#5c95e9e476b5>. Published 2020. Accessed September 20, 2020.
- 27 Rehm J, Kilian C, Ferreira-Borges C, et al. Alcohol use in times of the COVID 19: Implications for monitoring and policy. *Drug and Alcohol Review*. 2020;39(4):301-304.
- 28 US Police See Rise in Domestic Violence Calls Amid Coronavirus Lockdown. NBC Boston. <https://www.nbcboston.com/news/coronavirus/us-police-rise-domestic-violence-calls-coronavirus-lockdown/2102792/>. Published 2020. Accessed September 15, 2020.
- 29 Eligon J, Dewan S, Bogel-Burroughs N. In the Wake of Covid-19 Lockdowns, a Troubling Surge in Homicides. New York Times. <https://www.nytimes.com/2020/08/11/us/homicides-crime-kansas-city-coronavirus.html>. Published 2020. Accessed September 15, 2020.
- 30 Task Force on Community Preventive Services. Recommendations for reducing excessive alcohol consumption and alcohol-related harms by limiting alcohol outlet density. *American Journal of Preventive Medicine*. 2009;37(6):570-571.
- 31 Campbell CA, Hahn RA, Elder R, et al. The effectiveness of limiting alcohol outlet density as a means of reducing excessive alcohol consumption and alcohol-related harms. *American Journal of Preventive Medicine*. 2009;37(6):556-559.
- 32 World Health Organization. Technical Annex (Version dated 12 April 2017) Updated Appendix 3 of the WHO Global NCD Action Plan 2013-2020. World Health Organization. [http://www.who.int/ncds/governance/technical\\_annex.pdf](http://www.who.int/ncds/governance/technical_annex.pdf). Published 2017. Accessed February 7, 2018.
- 33 Babor T, Caetano R, Casswell S, et al. *Alcohol: No Ordinary Commodity – Research and Public Policy*. Second ed. New York: Oxford University Press; 2010.
- 34 Selvam A. Chicago Cuts Off Liquor Sales After 9 p.m. Eater Chicago. <https://chicago.eater.com/2020/4/8/21213970/chicago-order-liquor-sales-curfew-nightly-coronavirus>. Published 2020. Accessed September 15, 2020.
- 35 Trangenstein PJ, Curriero FC, Webster D, et al. Outlet Type, Access to Alcohol, and Violent Crime. *Alcoholism: Clinical and Experimental Research*. 2018;42(11):2234-2245.
- 36 Zhang X, Hatcher B, Clarkson L, et al. Changes in density of on-premises alcohol outlets and impact on violent crime, Atlanta, Georgia, 1997-2007. *Preventing Chronic Disease*. 2015;12(5).
- 37 Jennings JM, Milam AJ, Greiner A, Furr-Holden CD, Curriero FC, Thornton RJ. Neighborhood alcohol outlets and the association with violent crime in one mid-Atlantic City: the implications for zoning policy. *Journal of Urban Health*. 2014;91(1):62-71.
- 38 Nesoff ED, Milam AJ, Branas CC, Martins SS, Knowlton AR, Furr-Holden DM. Alcohol Outlets, Neighborhood Retail Environments, and Pedestrian Injury Risk. *Alcoholism: Clinical and Experimental Research*. 2018;42(10):1979-1987.
- 39 Furr-Holden CDM, Nesoff ED, Nelson V, et al. Understanding the relationship between alcohol outlet density and life expectancy in Baltimore City: The role of community violence and community disadvantage. *American Journal of Community Psychology*. 2019;47(1):63-75.
- 40 Trangenstein PJ, Eck RH, Lu Y, et al. The Violence Prevention Potential of Reducing Alcohol Outlet Access in Baltimore, Maryland. *Journal of Studies on Alcohol and Drugs*. 2020;81(1):24-33.
- 41 Centers for Disease Control and Prevention. *Guide for Measuring Alcohol Outlet Density*. 2017.
- 42 National Institute of Justice. Violent Crime. <https://nij.ojp.gov/topics/crimes/violent-crime>. Published 2020. Accessed September 22, 2020.
- 43 Ross CE, Mirowsky J. Neighborhood disadvantage, disorder, and health. *Journal of Health and Social Behavior*. 2001;258-276.



cityhealth

AN INITIATIVE OF

the de Beaumont Foundation + Kaiser Permanente

**cityhealth.org**



@CityHealthOrg



@City\_Health



@CityHealth-Org